

TABLE OF CONTENTS

Tuesday, May 19, 2015

Session 1: Recognition

- 1-1 Biased Discriminant Analysis with Feature Line Embedding for Interactive Image Retrieval ... 1
Yu-Chen Wang, Chin-Chuan Han, Chang-Hsing Lee, Kuo-Chin Fan (Taiwan)
- 1-2 Discriminative Learning of Apparel Features 5
Rasmus Rothe, Marko Ristin, Matthias Dantone, Luc Van Gool (Switzerland)
- 1-3 Multi-View Hypotheses Transfer for Enhanced Object Recognition in Clutter 10
Thomas F aulhammer, Michael Zillich, Markus Vincze (Austria)
- 1-4 Affine Invariant Visual Phrases for Object Instance Recognition 14
Viorica P atr ucean, Maks Ovsjanikov (United Kingdom)

Session 2: 3D

- 2-1 Entire Shape Scan System with Multiple Pro-Cams Using Texture Information and Accurate Silhouette Creating Technique 18
Yoshinori Oki, Marco Visentini-Scarzanella, Tomohiro Wada, Ryo Furukawa, Ryusuke Sagawa, Hiroshi Kawasaki (Japan)
- 2-2 Automatic 3D Industrial Point Cloud Modeling and Recognition 22
Guan Pang, Rongqi Qiu, Jing Huang, Suyu You, Ulrich Neumann (United States of America)
- 2-3 Enhanced Surface Normal Computation by Exploiting RGB-D Sensory Information 26
Jens Hedrich, Fran ois Genois, Dietrich Paulus, Marcin Grzegorzek (Germany)

Session 3: IAPR Invited Talk 1

- 3-1 3D Reconstruction from Photographs – Principles and Applications 30
Jan Heller *1, Michal Havlena *2, Michal Jancosek *3, Akihiko Torii *4, Tomas Pajdla *1
(1: CTU in Prague, 2: ETH Zurich, 3: Capturing Reality, 4: Tokyo Institute of Technology)

Session 5: Poster Session 1

- 5-2 Discussion on a Method to Extract Scallop Using Line Convergence Index Filter from Granule-Sand Seabed Videos 35
Koichiro Enomoto, Masashi Toda, Yasuhiro Kuwahara (Japan)
- 5-3 Structural Inpainting of Road Patches for Anomaly Detection 41
Asim Munawar, Clement Creusot (Japan)
- 5-4 Semantic Rich ICM Algorithm for VHR Satellite Images Segmentation 45
J er mie Sublime, Andr es Troya-Galvis, Youn es Bennani, Antoine Cornu ejols, Pierre Gan arski (France)

5-5	Using Polynomials to Correct Non-Uniform Backgrounds in Thermal Images Caused by Uneven Heating	49
	<i>Kai-Yi Zheng, Yu-Sung Chang, Kai-Hong Wang, Yuan Yao (Taiwan)</i>	
5-6	An Innovative of Pyramid-Based Fusion for Generating the HDR Images in Common Display Devices	53
	<i>Suthum Keerativittayanun, Toshiaki Kondo, Kazunori Kotani, Teera Phatrapornnant (Thailand)</i>	
5-7	Inferior Alveolar Canal Segmentation in Cone Beam Computed Tomography Images Using an Adaptive Diffusion Flow Active Contour Model	57
	<i>Chadaporn Keatmanee, Stanislav Makhanov, Saowapak Thongvigitmanee, Kazunori Kotani, Toshiaki Kondo (Thailand)</i>	
5-8	3D Lung Nodule Candidates Detection in Multiple Scales	61
	<i>Jorge Novo, Luis Gonçalves, Ana Maria Mendonça, Aurélio Campilho (Portugal)</i>	
5-9	Modeling the Stone Floor Based on Excavation Information Using Implicit Polynomial	65
	<i>Yoshihiro Sato, Yosuke Shinya, Bo Zheng, Takeshi Oishi, Katsushi Ikeuchi (Japan)</i>	
5-10	Hierarchical Summarization for Easy Video Applications	69
	<i>Nithya Sudhakar, Sharat Chandran (India)</i>	
5-11	Character Extraction by Integrating Color into Edge-Based Methods	73
	<i>Naoki Chiba, Xinhao Liu (Japan)</i>	
5-12	Face Photo-Sketch Recognition Based on Joint Dictionary Learning	77
	<i>Jixuan Liu, Seho Bae, Hanjae Park, Lei Li, Seongbeak Yoon, Juneho Yi (Korea, South)</i>	
5-13	A Hybrid Approach to Pedestrian Clothing Color Attribute Extraction	81
	<i>Mu Gao, Yuning Du, Haizhou Ai, Shihong Lao (China)</i>	
5-14	Scene Retrieval by Unsupervised Salient Part Discovery	85
	<i>Naotoshi Sugegaya, Kanji Tanaka, Kentaro Yanagihara (Japan)</i>	
5-16	An Efficient FPGA Implementation of the Harris Corner Feature Detector	89
	<i>Tak Lon Chao, Kin Hong Wong (China)</i>	
5-17	Mobile Real-Time Single Image 3D Corridor Reconstruction Using J-Linkage	94
	<i>Greg Olmschenk, Zhigang Zhu (United States of America)</i>	
5-18	Egocentric Articulated Pose Tracking for Action Recognition	98
	<i>Haruka Yonemoto, Kazuhiko Murasaki, Tatsuya Osawa, Kyoko Sudo, Jun Shimamura, Yukinobu Taniguchi (Japan)</i>	
5-19	A Novel Spiral Addressing Scheme for Rectangular Images	102
	<i>Min Jing, Bryan Scotney, Sonya Coleman, Martin McGinnity (United Kingdom)</i>	
5-20	Illuminant Classification Based on Random Forest	106
	<i>Bozhi Liu, Guoping Qiu (United Kingdom)</i>	
5-21	Transfer Learning Method Using Multi-Prediction Deep Boltzmann Machines for a Small Scale Dataset	110
	<i>Yoshihide Sawada, Kazuki Kozuka (Japan)</i>	
5-22	Part-Segment Features for Articulated Pose Estimation	114
	<i>Norimichi Ukita (Japan)</i>	

5-23	Connectivity-Based Error Evaluation for Ellipse Fitting	118
	<i>Tomonari Masuzaki, Yasuyuki Sugaya (Japan)</i>	
5-24	Weighted Hough Forest for Object Detection	122
	<i>Yusuke Murai, Yuji Yamauchi, Takayoshi Yamashita, Hironobu Fujiyoshi (Japan)</i>	
5-25	Fine-Grained Classification of Identity Document Types with Only One Example	126
	<i>Marcel Simon, Erik Rodner, Joachim Denzler (Germany)</i>	
5-26	Similar Handwritten Chinese Character Recognition Based on Adaptive Discriminative Locality Alignment	130
	<i>Xiwen Qu, Ning Xu, Weiqiang Wang, Ke Lu (China)</i>	
5-27	Pose Estimation of Textureless Objects in Cluttered Environments	134
	<i>Blaž Bratanič, Boštjan Likar, Franjo Pernuš, Dejan Tomažević (Slovenia)</i>	
5-28	Grouped Outlier Removal for Robust Ellipse Fitting	138
	<i>Mang Shao, Yoshihisa Ijiri, Kosuke Hattori (United Kingdom)</i>	
5-29	Reliable Background Prediction Using Approximated GMM	142
	<i>Tomosuke Maeda, Tomohiko Ohtsuka (Japan)</i>	
5-30	Manufactured Object Sub-Segmentation Based on Reflection Motion Estimation	146
	<i>Qinglin Lu, Olivier Laligant, Eric Fauvet, Anastasia Zakharova (France)</i>	
5-31	Unsupervised Muscle Region Extraction by Fuzzy Decision Based Saliency Feature Integration on Thigh MRI for 3D Modeling	150
	<i>Nevrez Imamoglu, Jose Gomez-Tames, Siyu He, Dong-Yun Gu, Kahori Kita, Wenwei Yu (Japan)</i>	
5-32	Training-Free Moving Object Detection System Based on Hierarchical Color-Guided Motion Segmentation	154
	<i>Xinfeng Bao, Gijs Dubbelman, Svitlana Zinger, Peter H. N. de With (Netherlands)</i>	
5-33	Multiple-Organ Segmentation Based on Spatially-Divided Neighboring Data Energy	158
	<i>Minato Morita, Asuka Okagawa, Yuji Oyamada, Yoshihiko Mochizuki, Hiroshi Ishikawa (Japan)</i>	
5-34	WM-SBA: Weighted Multibody Sparse Bundle Adjustment	162
	<i>Kai Cordes, Mark Hockner, Hanno Ackermann, Bodo Rosenhahn, Jörn Ostermann (Germany)</i>	
5-35	Bundle Adjustment Revisited for Slam with RGB-D Sensors	166
	<i>Kathia Melbouci, Sylvie Naudet Collette, Vincent Gay-Bellile, Omar Ait Aider, Mathieu Carrier, Michel Dhome (France)</i>	
5-36	Tracking a Table Tennis Ball for Umpiring Purposes	170
	<i>Hnin Myint, Patrick Wong, Laurence Dooley, Adrian Hopgood (United Kingdom)</i>	
5-37	A New Method to Detect Nystagmus for Vertigo Diagnosis System by Eye Movement Velocity	174
	<i>Theekapun Charoenpong, Visan Mahasitthiwat, Preeyanan Pattrapisetwong (Thailand)</i>	

5-39	A Lens Collar Auto-Inspection System	182
	<i>Chien-Chih Wang, Ssu-Han Chen (Taiwan)</i>	
5-40	Surface Defect Detection in Low-Contrast Images Using Basis Image Representation	186
	<i>Du-Ming Tsai, Yan-Hsin Tseng, Wei-Yao Chiu (Taiwan)</i>	

Wednesday, May 20, 2015

Session 6: ITS

6-1	Augmenting Off-the-Shelf Paper Maps Using Intersection Detection and Geographical Information Systems	190
	<i>Liming Yang, Jean-Marie Normand, Guillaume Moreau (France)</i>	
6-2	Leveraging Image Based Prior for Visual Place Recognition	194
	<i>Taisho Tsukamoto, Kanji Tanaka (Japan)</i>	
6-3	Beyond Thinking in Common Categories: Predicting Obstacle Vulnerability Using Large Random Codebooks	198
	<i>Johannes Rühle, Erik Rodner, Joachim Denzler (Germany)</i>	
6-4	Road Sign-Aided Estimation of Visibility Conditions	202
	<i>Rachid Belaroussi, Dominique Gruyer (France)</i>	

Session 7: Industry

7-1	Automated Visual Inspection of Pharmaceutical Tablets in Heavily Cluttered Dynamic Environments	206
	<i>Gregor Podrekar, Blaž Bratanič, Boštjan Likar, Franjo Pernuš, Dejan Tomažević (Slovenia)</i>	
7-2	Visual Words for Automated Visual Inspection of Bulk Materials	210
	<i>Matthias Richter, Tomas Längle, Jürgen Beyerer (Germany)</i>	
7-3	OLED Panel Defect Detection Using Local Inlier-Outlier Ratios and Modified LBP	214
	<i>Vishwanath Sindagi, Sumit Srivastava (India)</i>	
7-4	Pixel-Wise Radiometric Line Scanner Calibration	218
	<i>Francois Johannes Louw, Masaaki Iiyama, Takuya Funatomi, Michihiko Minoh (Japan)</i>	

Session 8: IAPR Invited Talk 2

8-1	Color Image Processing from the Physical, Psychological and Biological Viewpoints	222
	<i>Prof. Johji Tajima (Nagoya City University)</i>	

Session 9: Pedestrian

9-1	Boosted Pedestrian Detector Adaptation in Specific Scenes	230
	<i>Puhao Ma, Lei Sun, Haizhou Ai, Shun Sakai (China)</i>	
9-2	Fast Discrimination by Early Judgment Using Linear Classifier	234
	<i>Takato Kurokawa, Yuji Yamauchi, Takayoshi Yamashita, Hironobu Fujiyoshi (Japan)</i>	

Session 10: Poster Session2

- 10-1 Automatic Grape Bunch Detection in Vineyards for Precise Yield Estimation 238
Scarlett Liu, Mark Albert Whitty, Stephen Cossell (Australia)
- 10-2 OKIRAKU Search: Leaf Images Based Visual Tree Search System 242
Takeshi Saitoh, Toshihiro Iwata, Kentaro Wakisaka (Japan)
- 10-3 Pedestrian Detection in Thermal Images Using Adaptive Fuzzy C-Means Clustering and Convolutional Neural Networks 246
Vijay John, Zheng Liu, Seiichi Mita, Bin Qi (Japan)
- 10-4 PerSEE: a Central Sensors Fusion Electronic Control Unit for the Development of Perception-Based ADAS 250
Dominique Gruyer, Rachid Belaroussi, Xuanpeng Li, Benoit Lusetti, Marc Revilloud, Sebastien Glaser (France)
- 10-5 Metamerism-Based Shading Illusion 255
Daisuke Miyazaki, Takafumi Saneshige, Masashi Baba, Ryo Furukawa, Masahito Aoyama, Shinsaku Hiura (Japan)
- 10-6 Digital Image Watermarking on Illumination Component 259
Piyanart Chotikawanid, Kharittha Thongkor, Pipat Supasirisun, Thumrongrat Amornraksa (Thailand)
- 10-8 Temporal-Spatial Validation of Knot-Tying Procedures Using RGB-D Sensor for Training of Surgical Operation 263
Yoko Ogawa, Nobutaka Shimada, Yoshiaki Shirai, Yoshimasa Kurumi, Masaru Komori (Japan)
- 10-9 Document Image Dataset Indexing and Compression Using Connected Components Clustering 267
Housseem Chatbri, Keisuke Kameyama (Japan)
- 10-10 Development of Design and Operation Supporting Techniques for Product Inspection Devices Using Virtual Devices 271
Fumiyuki Takahashi, Hideki Abe, Susumu Haga, Tetsuo Koezuka (Japan)
- 10-11 A Hybrid Wavelet and Temporal Fusion Algorithm for Film and Video Denoising 275
Hannes Fassold, Peter Schallauer (Austria)
- 10-12 A Deep-Learning Approach to Facial Expression Recognition with Candid Images 279
Wei Li, Min Li, Zhong Su, Zhigang Zhu (United States of America)
- 10-13 Multi-Genomic Curve Extraction 283
Raphaël Labayrade, Mathias Ngo (France)
- 10-14 Bag of Words Representation and SVM Classifier for Timber Knots Detection on Color Images 287
Mohamad Mazen Hittawe, Désiré Sidibé, Fabrice Mériaudeau (France)
- 10-15 Non-Parametric Image Transforms for Sparse Disparity Maps 291
Dexmont Peña, Alistair Sutherland (Ireland)

10-16	Increasing the Precision of Junction Shaped Features	295
	<i>Kai Cordes, Jörn Ostermann (Germany)</i>	
10-17	On the Number of Holes of a 2-D Binary Object	299
	<i>Humberto Sossa (Mexico)</i>	
10-18	Local Behavior Modeling Based on Long-Term Tracking Data	303
	<i>Rainer Planinc, Martin Kampel (Austria)</i>	
10-19	A Practical Classifier for Photographs and Non-Photographic Images Based on Local Visual Features	307
	<i>Kei Terayama, Hirohisa Hioki (Japan)</i>	
10-20	Automatic Target Recognition by Infrared and Visible Image Matching	312
	<i>Kai-Sheng Cheng, Huei-Yung Lin (Taiwan)</i>	
10-21	Sparse Image Reconstruction by Two Phase RBM Learning: Application to Mine Planning	316
	<i>Yanyan Mu, Frank Ferrie, Roussos Dimitrakopoulos (Canada)</i>	
10-22	Occlusion-Free Appearance Modeling of Body Parts for Human Pose Estimation	321
	<i>Yuki Kawana, Norimichi Ukita, Norihiro Hagita (Japan)</i>	
10-23	Semantic Mapping for Mobile Outdoor Robots	325
	<i>Dagmar Lang, Susanne Friedmann, Jens Hedrich, Dietrich Paulus (Germany)</i>	
10-25	Action Recognition in Bed Using BAMS for Assisted Living and Elderly Care	329
	<i>Manuel Martinez, Lukas Rybok, Rainer Stiefelhagen (Germany)</i>	
10-26	Geometric Interpretation of Fisher's Linear Discriminant Analysis through Communication Theory	333
	<i>Jun Fujiki, Masaru Tanaka, Hitoshi Sakano, Akisato Kimura (Japan)</i>	
10-27	Correspondence Rejection by Trilateration for 3D Point Cloud Registration	337
	<i>Kishan Lachhani, Jifang Duan, Hadi Baghsiahi, Eero Willman, David R. Selviah (United Kingdom)</i>	
10-28	Surface Object Recognition with CNN and SVM in Landsat 8 Images	341
	<i>Tomohiro Ishii, Ryosuke Nakamura, Hidemoto Nakada, Yoshihiko Mochizuki, Hiroshi Ishikawa (Japan)</i>	
10-29	Lane Detection in Surveillance Videos Using Vector-Based Hierarchy Clustering and Density Verification	345
	<i>Shan-Yun Teng, Kun-Ta Chuang Chuang, Chun-Rong Huang, Cheng-Chun Li (Taiwan)</i>	
10-30	Circle-Based Eye Center Localization (CECL)	349
	<i>Yustinus Eko Soelistio, Eric Postma, Alfons Maes (Indonesia)</i>	
10-31	Unsupervised Figure-Ground Segmentation Using Edge Detection and Game-Theoretical Graph-Cut Approach	353
	<i>Yu-Min Hsiao, Long-Wen Chang (Taiwan)</i>	
10-32	Visually Salient Features for Highway Scene Analysis	357
	<i>Anurag Singh, Chee Hung Henry Chu, Michael A. Pratt (United States of America)</i>	
10-34	General-Purpose Road Boundary Detection with Stereo Camera	361
	<i>Takuya Nanri, Abdelaziz Khat, Hiroyuki Furusho (Japan)</i>	

10-35 Tracking Image Features with PCA-SURF Descriptors.....	365
<i>Ardhisha Pancham, Daniel Withey, Glen Bright (South Africa)</i>	
10-36 A Novel Multi Modal Tracking Method Based on Depth and Semantic Color Features for Human Robot Interaction.....	369
<i>Aswin Chandarr, Maja Rudinac, Pieter Jonker (Netherlands)</i>	
10-37 Distributed Sigma Point Information Filters for Target Tracking in Camera Networks.....	373
<i>Shiva Kumar K A, K. R. Ramakrishnan, G. N. Rathna (India)</i>	
10-38 A Dataset for Computer-Vision-Based PCB Analysis.....	378
<i>Christopher Pramerdorfer, Martin Kampel (Austria)</i>	

Thursday, May 21, 2015

Session 11: Action

11-1 Effective Fusing the Factored Matrices in Dual Tensors for Action Recognition.....	386
<i>Chung-Yang Hsieh, Wei-Yang Lin (Taiwan)</i>	
11-2 Human Motion Prediction Considering Environmental Context.....	390
<i>Igi Ardiyanto, Jun Miura (Japan)</i>	
11-3 Lie Algebra-Based Kinematic Prior for 3D Human Pose Tracking.....	394
<i>Edgar Simo-Serra, Carme Torras, Francesc Moreno-Noguer (Spain)</i>	
11-4 Human Arm Pose Modeling with Learned Features.....	398
<i>Chongguo Li, Nelson H.C. Yung, Edmund Lam (China)</i>	

Session 12: Biomedical

12-1 Dorsal Hand Vein Recognition Based on EP-Tree.....	402
<i>Jen-Chun Lee (Taiwan)</i>	
12-2 Compressive Sensing Reconstruction Using Collaborative Sparsity among Color Channels.....	406
<i>Satoshi Satou, Motonori Ishii, Yoshihisa Kato, Kunio Nobori, Takeo Azuma (Japan)</i>	
12-3 Dependence on the Display Methods of Change in Accommodation and Convergence When a Target Moves along the Depth Direction.....	410
<i>Yuki Yokoyama, Shinya Mochiduki, Hideaki Takahira, Mitsuho Yamada (Japan)</i>	
12-4 Non-Contact Pulse Transit Time Measurement Using Imaging Camera, and Its Relation to Blood Pressure.....	414
<i>Kenta Murakami, Mototaka Yoshioka, Jun Ozawa (Japan)</i>	

Session 13: IAPR Invited Talk 3

13-1 Research Opportunities in Creating Medical Images.....	418
<i>Prof. Ramin Zabih (Cornell University)</i>	

Session 14: Poster Session 3

- 14-1 Mobile 3D Wood Pile Surveying 422
Christopher Herbon, Benjamin Otte, Klaus-Dietz Tönnies, Bernd Stock (Germany)
- 14-2 Portable, Automatic Water Level Estimation Using Mobile Phone Cameras 426
Machiel Bruinink, Aswin Chandarr, Maja Rudinac, Peter-Jules van Overloop, Pieter Jonker (Netherlands)
- 14-3 Annotation Driven MAP Search Space Estimation for Sliding-Window Based Person Detection 430
Stefan Becker, Wolfgang Hübner, Michael Arens (Germany)
- 14-4 Tsai Camera Calibration Enhanced 435
Trevor Gee, Patrice Delmas, Nick Stones-Havas, Chris Sinclair, Wannes Van Der Mark, Wei Li, Heide Friedrich, Georgy Gimel'farb (New Zealand)
- 14-5 Combined Generation of Road Marking and Road Sign Databases Applied to Consistency Checking of Pedestrian Crossings 439
Lykele Hazelhoff, Ivo Creusen, Thomas Woudsma, Xinfeng Bao, Peter H. N. de With (Netherlands)
- 14-6 Fast Single Image Dehazing through Edge-Guided Interpolated Filter 443
Ximei Zhu, Ying Li, Yu Qiao (China)
- 14-7 Discriminating Motion Patterns of ACL Reconstructed Patients from Healthy Individuals 447
Worapan Kusakunniran, Nattaporn Dirakbussarakom, Nantawat Prachasri, Duangkamol Yangchaem, Jos Vanrenterghem, Mark Robinson (Thailand)
- 14-8 Computer Vision-Based Approach for Rite Decryption in Old Societies 451
Jilliam María Díaz Barros, Cédric Demonceaux, Adlane Habed, Alamin Mansouri (France)
- 14-9 The Method Based on View-Directional Consistency Constraints for Robust 3D Object Recognition 455
Jun Shimamura, Taiga Yoshida, Yukinobu Taniguchi, Hiroko Yabushita, Kyoko Sudo, Kazuhiko Murasaki (Japan)
- 14-10 Efficient Three Dimensional Rotation Estimation for Camera-Based OCR 459
Kanta Kuramoto, Wataru Ohyama, Tetsushi Wakabayashi, Fumitaka Kimura (Japan)
- 14-11 Intelligent Autofocus with Adaptive Depth of Field 463
Pu-Chuan Kang, Huei-Yung Lin (Taiwan)
- 14-13 Spatio-Temporal Texture-Based Feature Extraction for Spontaneous Facial Expression Recognition 467
Siti Khairuni Amalina Kamarol, Nor Syazana Meli, Mohamed Hisham Jaward, Nader Kamrani (Malaysia)
- 14-14 Spatio-Temporal Descriptor for Abnormal Human Activity Detection 471
Boon Lung Fam, Mohamed Hisham Jaward, Jussi Parkkinen (Malaysia)
- 14-15 Expanding Histogram of Colors with Gridding to Improve Tracking Accuracy 475
Kourosh Meshgi, Shin Ishii (Japan)

14-16	Measuring the Complexity of Two Dimensional Binary Patterns —Sub-Symmetries Versus Papentin Complexity—	480
	<i>Godfried T. Toussaint, Noris S. Onea, Quan H. Vuong (United Arab Emirates)</i>	
14-17	Novel Spatio-Temporal Features for Fingertip Writing Recognition in Egocentric Viewpoint ..	484
	<i>Muhammad Zaid Hameed, Guillermo Garcia-Hernando, Tae-Kyun Kim (United Kingdom)</i>	
14-18	3D Hand Skeleton Model Estimation from a Depth Image	489
	<i>Chin-Yun Fan, Meng-Hsuan Lin, Te-Feng Su, Shang-Hong Lai, Chih-Hsiang Yu (Taiwan)</i>	
14-19	Digital Image Watermarking Based on Regularized Filter	493
	<i>Kharittha Thongkor, Pipat Supasirisun, Thumrongrat Amornraksa (Thailand)</i>	
14-20	Knot Detection in X-Ray Images of Wood Planks Using Dictionary Learning	497
	<i>Mattias Hansson, Alexandru Enescu, Sami S. Brandt (Denmark)</i>	
14-21	A Discriminative Cascade CNN Model for Offline Handwritten Digit Recognition	501
	<i>Shulan Pan, Yanwei Wang, Changsong Liu, Xiaoqing Ding (China)</i>	
14-22	Visual Detection and Species Classification of Orchid Flowers	505
	<i>Steven Puttemans, Toon Goedemé (Belgium)</i>	
14-23	Probabilistic Nodes for Modelling Classification Uncertainty for Random Forest	510
	<i>Florian Baumann, Karsten Vogt, Arne Ehlers, Bodo Rosenhahn (Germany)</i>	
14-24	METU Dataset: A Big Dataset for Benchmarking Trademark Retrieval	514
	<i>Osman Tursun, Sinan Kalkan (Turkey)</i>	
14-25	Image Annotation Via Deep Neural Network	518
	<i>Chengjian Sun, Songhao Zhu, Zhe Shi (China)</i>	
14-26	A Study on the Robustness of Shape Descriptors to Common Scanning Artifacts	522
	<i>Ferran Roure, Yago Díez, Xavier Lladó, Josep Forest, Tomislav Pribanic, Joaquim Salvi (Spain)</i>	
14-27	A Closed-form Estimate of 3D ICP Covariance	526
	<i>Prakhya Sai Manoj, Bingbing Liu, Yan Rui, Weisi Lin (Singapore)</i>	
14-28	View Extension for Teleoperated MAV	530
	<i>Ren Foo Lim, Akihiko Torii, Masatoshi Okutomi (Japan)</i>	
14-29	Object Detection in Surveillance Video from Dense Trajectories	535
	<i>Mengyao Zhai, Lei Chen, Mehran Khodabandeh, Jinling Li, Greg Mori (Canada)</i>	
14-30	A Deep Reinforcement Learning Approach to Character Segmentation of License Plate Images	539
	<i>Farnaz Abtahi, Zhigang Zhu, Aaron M. Burry (United States of America)</i>	
14-31	VHR Satellite Image Segmentation Based on Topological Unsupervised Learning	543
	<i>Nistor Grozavu, Nicoleta Rogovschi, Guénaél Cabanes, Andrés Troya-Galvis, Pierre Gançarski (France)</i>	
14-32	Multi-Organ Segmentation by Minimization of Higher-Order Energy for CT Boundary	547
	<i>Asuka Okagawa, Yuji Oyamada, Yoshihiko Mochizuki, Hiroshi Ishikawa (Japan)</i>	

14-33 Three-DoF Pose Estimation of Asteroids by Appearance-Based Linear Regression with Divided Parameter Space	551
<i>Naoki Kobayashi, Yuji Oyamada, Yoshihiko Mochizuki, Hiroshi Ishikawa (Japan)</i>	
14-34 Embedded Human-Following Mobile-Robot with an RGB-D Camera	555
<i>Minh-Quoc Do, Chang-Hong Lin (Taiwan)</i>	
14-35 Respiratory Motion Prediction from CBCT Image Observations Using UKF	559
<i>Manivannan Sundarapandian, Ramakrishnan Kalpathi, R Alfredo Siochi (India)</i>	
14-36 A Portable 6-DOF Motion Tracker Using High-Accuracy AR Markers — First Report on the Feasibility	563
<i>Hideyuki Tanaka, Yasushi Sumi, Yoshio Matsumoto (Japan)</i>	
14-37 Towards 3D Human Posture Estimation Using Multiple Kinects Despite Self-Contacts	567
<i>Andrew Phan, Frank P. Ferrie (Canada)</i>	



14-39 Robust Visual Analysis for Planogram Compliance Problem	576
<i>Anurag Saran, Ehtesham Hassan, Avinash Kumar Maurya (India)</i>	

Session 15: Person

15-1 Tri-Subjects Kinship Verification: Understanding the Core of a Family	580
<i>Xiaoqian Qin, Xiaoyang Tan, Songcan Chen (China)</i>	
15-2 Estimation of Face Parameters Using Correlation Analysis and a Topology Preserving Prior	584
<i>Stella Grasshof, Hanno Ackermann, Jörn Ostermann (Germany)</i>	
15-3 People Re-Identification Using Two-Stage Transfer Metric Learning	588
<i>Guanwen Zhang, Jien Kato, Yu Wang, Kenji Mase (Japan)</i>	